

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

**THIS PAGE BLANK (USPTO)**

GenCore version 5.1.6  
Copyright (c) 1993 - 2003 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: June 18, 2003, 17:14:36 ; Search time 72.5077 Seconds  
(without alignments)  
504.414 Million cell updates/sec

Title: US-09-807-933B-1  
Perfect score: 1836  
Sequence: 1 MFTITASSALALALGTEM.....TYKEVTCPEKTRAKTGSRK 338

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 417779 seqs, 108206813 residues  
Total number of hits satisfying chosen parameters: 417779

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

- Database : Published Applications AA.\*
- 1: /cgn2\_6/ptodata/2/pubpaa/US08\_NEW\_PUB.pep.\*
  - 2: /cgn2\_6/ptodata/2/pubpaa/PCT\_NEW\_PUB.pep.\*
  - 3: /cgn2\_6/ptodata/2/pubpaa/US06\_NEW\_PUB.pep.\*
  - 4: /cgn2\_6/ptodata/2/pubpaa/US07\_NEW\_PUB.pep.\*
  - 5: /cgn2\_6/ptodata/2/pubpaa/US07\_PUBCOMB.pep.\*
  - 6: /cgn2\_6/ptodata/2/pubpaa/PCTUS\_PUBCOMB.pep.\*
  - 7: /cgn2\_6/ptodata/2/pubpaa/US08\_PUBCOMB.pep.\*
  - 8: /cgn2\_6/ptodata/2/pubpaa/US09\_NEW\_PUB.pep.\*
  - 9: /cgn2\_6/ptodata/2/pubpaa/US05\_PUBCOMB.pep.\*
  - 10: /cgn2\_6/ptodata/2/pubpaa/US10\_NEW\_PUB.pep.\*
  - 11: /cgn2\_6/ptodata/2/pubpaa/US10\_PUBCOMB.pep.\*
  - 12: /cgn2\_6/ptodata/2/pubpaa/US60\_NEW\_PUB.pep.\*
  - 13: /cgn2\_6/ptodata/2/pubpaa/US60\_PUBCOMB.pep.\*
  - 14: /cgn2\_6/ptodata/2/pubpaa/US60\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	756.5	41.2	229	9	US-10-007-521-12
2	755.5	41.1	225	9	US-10-007-521-2
3	755.5	41.1	297	9	US-10-007-521-4
4	755.5	41.1	308	9	US-10-007-521-6
5	750.5	40.9	205	9	US-09-261-329-7
6	743.5	40.5	201	9	US-09-261-329-5
7	743.5	40.1	201	9	US-09-261-329-4
8	722	39.3	349	9	US-10-007-521-10
9	718	39.1	310	9	US-10-007-521-22
10	716.5	39.0	203	9	US-09-261-329-9
11	716.5	39.0	222	9	US-10-007-521-14
12	716.5	39.0	294	9	US-10-007-521-24
13	703	38.3	202	9	US-09-261-329-3
14	695.5	37.9	235	1	US-08-841-636A-31
15	694	37.8	376	10	US-09-735-787-4
16	684.5	37.3	203	9	US-09-261-329-6
17	680	37.0	305	10	US-09-735-787-2
18	679	37.0	202	9	US-09-261-329-1
19	670	36.5	295	9	US-10-007-521-8

20	667.5	36.4	226	9	US-10-007-521-16	Sequence 16, Appl
21	667.5	36.4	293	9	US-10-007-521-20	Sequence 18, Appl
22	667.5	36.4	298	9	US-10-007-521-18	Sequence 20, Appl
23	659.5	35.9	203	9	US-09-261-329-8	Sequence 8, Appl
24	655	35.7	202	9	US-09-261-329-2	Sequence 11, Appl
25	510.5	27.8	211	9	US-09-261-329-11	Sequence 10, Appl
26	491.5	26.8	235	9	US-09-261-329-10	Sequence 26, Appl
27	437.5	23.8	138	9	US-10-007-521-26	Sequence 32, Appl
28	222	12.1	493	9	US-10-197-294A-2	Sequence 52, Appl
29	221.5	12.1	75	9	US-10-007-521-32	Sequence 34, Appl
30	194.5	10.6	57	9	US-10-007-521-52	Sequence 4, Appl
31	190.5	10.4	59	9	US-10-007-521-34	Sequence 547, App
32	186	10.1	39	9	US-09-916-494A-4	Sequence 42, Appl
33	184	10.0	454	9	US-10-213-996-9	Sequence 78, Appl
34	178	9.7	2014	9	US-10-123-155-547	Sequence 13, Appl
35	176.5	9.6	60	9	US-10-007-521-42	Sequence 45, Appl
36	175.5	9.6	6	9	US-10-007-521-70	Sequence 69, Appl
37	169.5	9.2	55	9	US-10-007-521-78	Sequence 283, App
38	169.5	9.2	1422	10	US-09-735-933-1	Sequence 219, App
39	169	9.2	1591	9	US-10-073-912-13	
40	168.5	9.2	2403	9	US-10-184-644-45	
41	168.5	9.2	2403	9	US-10-184-634-45	
42	168.5	9.2	2316	9	US-10-123-155-69	
43	168	9.2	2294	9	US-10-184-644-283	
44	168	9.2	2294	9	US-10-184-634-283	
45	166.5	9.1	1076	9	US-10-026-072-219	

ALIGNMENTS

RESULT 1  
US-10-007-521-12  
Sequence 12, Application US/10007521  
Publication No. US20030054539A1  
GENERAL INFORMATION:  
APPLICANT: Schuelein, Martin  
Andersen, Lene N.  
Lassen, Soren P.  
Kauppinen, Markus S.  
Lange, Lene  
Nielsen, Ruby I.  
Ihara, Michiko  
Takagi, Shinobu  
TITLE OF INVENTION: No. US20030054539A1el Endoglucaases  
NUMBER OF SEQUENCES: 109  
CORRESPONDENCE ADDRESS:  
ADDRESSER: No. US20030054539A1o No. US20030054539A1disk of No. US200300545  
STREET: 405 Lexington Avenue, 64th Floor  
CITY: New York  
STATE: New York  
COUNTRY: United States of America  
ZIP: 10174-6401  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/007,521  
FILING DATE: 10-Dec-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/651,136  
FILING DATE: 21-MAY-1996  
ATTORNEY/AGENT INFORMATION:  
NAME: Lambiris, Elias J.  
REGISTRATION NUMBER: 33,728  
REFERENCE/DOCKET NUMBER: 4366.200-US  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 212-867-0123  
TELEFAX: 212-878-9655  
INFORMATION FOR SEQ ID NO: 12:



MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 4  
US-10-007-521-4

Query Match 41.1%; Score 755.5; DB 9; Length 297;  
Best Local Similarity 61.2%; Pred. No. 9.3e-47;  
Matches 128; Conservative 35; Mismatches 41; Indels 5; Gaps 3;

QY 130 SGNVTRRWDCCKASCSPGKANVSSPVKSCNKDGVTLSDSNAQSGCN-GGNSYWCND 188  
DB 21 SGIGQTRRWDCCKPSCAMPK-GPSSPVQACDKNDPLNDGSTRSGCDAGSAYWCSS 79  
QY 189 NOPAVNDNLAVFPAALISGGESRWCCSCELTFTSTSVAGKXVQVNTNGDLGSS 248  
DB 80 QSPMAVSDLSYGMVAVKLAGSSESQWCCACYELFTSGPVAKKMI VQATNTGDLGDN 139  
QY 249 TGAHFDLQMGCGVGFNCGSSQWGAAPNDGWSRYGSISSADCSLPALQAGCKWRPN 308  
DB 140 ---HFDLAI PGGGVGFNACTDQYGAAPNGMGDRYGGIHSKECBSPFPAALKPCNWRPD 196  
QY 309 WFNADNPSTMYKEVTCPEKITAKTGCSR 337  
DB 197 WFNADNPSTVTFQEVACPSELTSKSGCSR 225

## RESULT 4

US-10-007-521-6  
Sequence 6, Application US/10007521  
Publication No. US20030054539A1  
GENERAL INFORMATION:  
APPLICANT: Schulein, Martin  
Andersen, Lene N.  
Laassen, Soren F.  
Kauppinen, Markus S.  
Lange, Lene  
Nielsen, Ruby I.  
Ihara, Michiko  
Takagi, Shinobu

TITLE OF INVENTION: No. US20030054539A1el Endoglucanases  
NUMBER OF SEQUENCES: 109  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. US20030054539A1o No. US20030054539A1disk of No. US20030054539A1  
STREET: 405 Lexington Avenue, 64th floor  
CITY: New York  
STATE: New York  
COUNTRY: United States of America  
ZIP: 10174-6401

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/10/007,521  
FILING DATE: 10-Dec-2001  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US/08/651,136  
FILING DATE: 21-May-1996

ATTORNEY/AGENT INFORMATION:  
NAME: Lambiris, Elias J.  
REGISTRATION NUMBER: 33,728  
REFERENCE/DOCKET NUMBER: 4366,200-US  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 212-867-0123  
TELEFAX: 212-878-9655  
INFORMATION FOR SEQ ID NO: 6:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 308 amino acids  
TYPE: amino acid  
TOPOLOGY: linear

MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 6:

US-10-007-521-6

Query Match 41.1%; Score 755.5; DB 9; Length 308;  
Best Local Similarity 61.2%; Pred. No. 9.6e-47;  
Matches 128; Conservative 35; Mismatches 41; Indels 5; Gaps 3;

QY 130 SGNVTRRWDCCKASCSPGKANVSSPVKSCNKDGVTLSDSNAQSGCN-GGNSYWCND 188  
DB 21 SGIGQTRRWDCCKPSCAMPK-GPSSPVQACDKNDPLNDGSTRSGCDAGSAYWCSS 79  
QY 189 NOPAVNDNLAVFPAALISGGESRWCCSCELTFTSTSVAGKXVQVNTNGDLGSS 248  
DB 80 QSPMAVSDLSYGMVAVKLAGSSESQWCCACYELFTSGPVAKKMI VQATNTGDLGDN 139  
QY 249 TGAHFDLQMGCGVGFNCGSSQWGAAPNDGWSRYGSISSADCSLPALQAGCKWRPN 308  
DB 140 ---HFDLAI PGGGVGFNACTDQYGAAPNGMGDRYGGIHSKECBSPFPAALKPCNWRPD 196  
QY 309 WFNADNPSTMYKEVTCPEKITAKTGCSR 337  
DB 197 WFNADNPSTVTFQEVACPSELTSKSGCSR 225

## RESULT 5

US-09-261-329-7  
Sequence 7, Application US/09261329  
Publication No. US20030092097A1  
GENERAL INFORMATION:  
APPLICANT: Andersen, Kim  
Schulein, Martin  
Christiansen, Lars  
Damgaard, Bo

APPLICANT: Von Der Oesen, Claus  
TITLE OF INVENTION: Cellulase Variants  
FILE REFERENCE: 4887.204-US  
CURRENT APPLICATION NUMBER: US/09/261,329  
CURRENT FILING DATE: 1999-03-03  
EARLIER APPLICATION NUMBER: 1013/96  
EARLIER FILING DATE: 1996-09-17  
NUMBER OF SEQ ID NOS: 26  
SOFTWARE: FastSeq for Windows Version 3.0  
SEQ ID NO 7

LENGTH: 205  
TYPE: PRT  
ORGANISM: Cellulase variants  
US-09-261-329-7

Query Match 40.9%; Score 750.5; DB 9; Length 205;  
Best Local Similarity 61.1%; Pred. No. 1.4e-46;  
Matches 127; Conservative 35; Mismatches 41; Indels 5; Gaps 3;

QY 131 GNGVTRRWDCCKASCSPGKANVSSPVKSCNKDGVTLSDSNAQSGCN-GGNSYWCND 189  
DB 1 GIGQTRRWDCCKPSCAMPK-GPSSPVQACDKNDPLNDGSTRSGCDAGSAYWCSSQ 59  
QY 190 NOPAVNDNLAVFPAALISGGESRWCCSCELTFTSTSVAGKXVQVNTNGDLGSS 249  
DB 60 SPMVAVSDLSYGMVAVKLAGSSESQWCCACYELFTSGPVAKKMI VQATNTGDLGDN 118  
QY 250 GAHFDLQMGCGVGFNCGSSQWGAAPNDGWSRYGSISSADCSLPALQAGCKWRPN 309  
DB 119 ---HFDLAI PGGGVGFNACTDQYGAAPNGMGDRYGGIHSKECBSPFPAALKPCNWRPD 176  
QY 310 WFNADNPSTMYKEVTCPEKITAKTGCSR 337  
DB 177 WFNADNPSTVTFQEVACPSELTSKSGCSR 204

## RESULT 6

US-09-261-329-5  
Sequence 5, Application US/09261329  
Publication No. US20030092097A1  
GENERAL INFORMATION:

191 PWA VND N L A Y G F A A A I S G G E S R W C C S C F E L I F I S I S V A G N N V V Z I N I S O B B O O O O

Db 80 NSFWAVSEDLHIGFAIAUSOGLEONCNC.....







```

REFERENCE/DOCKET NUMBER: 1716.0510005/MAC/TJS
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)371-2600
TELEFAX: (202)371-2540
INFORMATION FOR SEQ ID NO: 31:
SEQUENCE CHARACTERISTICS:
LENGTH: 235 amino acids
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: Melanocarpus albomyces
STRAIN: ALKO4237
FEATURE:
NAME/KEY: Protein
LOCATION: 1..235
OTHER INFORMATION: /label= 20K-cellulase
US-08-841-636A-31

Query Match 37.9%; Score 695.5; DB 1; Length 235;
Best Local Similarity 57.5%; Pred. No. 1,4e-42;
Matches 122; Conservative 33; Mismatches 48; Indels 9; Gaps 4;

QY 127 GGASNGVTTTRVDDCKKASCSPGKANNVSPVSCNKDGYTALSDSNAGSCNGNSYMC 186
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 18 GALANAGSTRVWDCKPCSCGWRGKGPVNPVPSCAN-FQRHDPFAVSCGGPAPSC 76
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 187 NDNPMAVNDNLAYGPAAALISGGGSRMCCSCFELFTSTSVAGKRVVQVNTGDLG 246
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 77 ADHSMAINDNLSTGFPAATLALSGQTESMCCACTALFTTSPVAGKTMVOSTGTGDLG 136
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 247 SSTGAHFDLQMGGGVGVIFNGCSSQWGA-PNDGMSRYGIISSASDCSLPSALQAGCKM 305
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 137 SN---HPLNLTIRGGGVLFDGCTPQFGLP---GARYGGISRNQECDSFPEPLKPGQW 189
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
QY 306 RPNWFKANDPMTYKEVTCPEKITAKTGCSR 337
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db 190 RFDWFOQADNPSTFERVQCPBELVARTGCR 221
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

RESULT 15
US-09-735-787-4
; Sequence 4, Application US/09735787
; Patent No. US20010036910A1
; GENERAL INFORMATION:
APPLICANT: Rasmussen, Grethe
Mikkelsen, Jan Moller
Schulein, Martin
Patkar, Shankant A.
Hagen, Fred
TITLE OF INVENTION: A Cellulase Preparation Comprising an
Endoglucanase Enzyme
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
ADDRESS: No. US20010036910A1 No. US20010036910A1disk of No. US200100369
STREET: 405 Lexington Avenue, 64th Floor
CITY: New York
STATE: New York
COUNTRY: United States of America
ZIP: 10174-6401
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/735,787
FILING DATE: 13-Dec-2000
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/189,028
FILING DATE: <Unknown>

```

## ATTORNEY/AGENT INFORMATION:

NAME: Lambiris, Elias J.

REGISTRATION NUMBER: 33,728

REFERENCE/DOCKET NUMBER: 3469, 214-US

## TELECOMMUNICATION INFORMATION:

TELEPHONE: 212-867-0123

TELEFAX: 212-878-9655

## INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 376 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 4:

US-09-735-787-4

Query Match 37.8%; Score 694; DB 10; Length 376;

Best Local Similarity 58.6%; Pred. No. 3e-42;

Matches 126; Conservative 33; Mismatches 48; Indels 8; Gaps 5;

```
QY 124 AVSGGASGNGVTRRYMDCKASCSWPGKANVSSPVKSCNKGVTALSDSNAQSGCNGNS 183
    ||| ||| : ||| ||| ||| ||| ||| : ||| : ||| : ||| ||| |||
DB 14 AVS-AASGSHSTRYMDCKPSCSWGKAANAPALTCDDND-NPLSNINAVNGCBGGGS 71
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
QY 184 -YMCNDNQPAVNDNLAYGFAAAAIISGGSRWCCSCFELTFTSTSYAGKKMNVQVNTNG 242
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 72 AYACTNYSFPAVNDNLAYGFAATKISGGSSEASWCACAYALTFTTGPVKGKKMIVQSTNTG 131
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
QY 243 GDIGSSTGAHFDLQMPGGVGVIENGSSQWGAPENDGWSRYGIISSASDCSLPSALQAG 302
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 132 GDIGDN--HFDLMPGGVGVIENGSSQWGAPENDGWSRYGIISSASDCSLPSALQAG 186
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
QY 303 CKRFENFKXADNPSMTYKEVTCPEKITAKTGCSR 337
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 187 CHMRFDMFENADNPFTFEQVQCPKALDISGCKR 221
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
```

Search completed: June 18, 2003, 17:44:40  
Job time : 74.5077 secs